

depositing a conductive layer over the substrate;  
forming a photoresist pattern on the conductive layer;  
etching the conductive layer using the photoresist pattern as a mask to  
form a lower electrode;  
removing the photoresist using an etching gas that is non-reactive with  
respect to the lower electrode, wherein the etching gas is one of H<sub>2</sub>O, a mixture  
of H<sub>2</sub> and O<sub>2</sub> in which an amount of H<sub>2</sub> is smaller than an amount of O<sub>2</sub>, a  
mixture H<sub>2</sub>O, NH<sub>3</sub>, and N<sub>2</sub>, a mixture of N<sub>2</sub> and NH<sub>3</sub>, a mixture of NH<sub>3</sub> and H<sub>2</sub>O,  
and a mixture of N<sub>2</sub> and H<sub>2</sub>O; and  
forming a dielectric film and an upper electrode on a surface of the lower  
electrode.

4. (Amended) A method for fabricating a capacitor of a semiconductor  
device comprising:

depositing a nitride film and an oxide film over a semiconductor  
substrate, the oxide film being deposited on the nitride film by chemical vapor  
deposition;

sequentially etching the oxide film and the nitride film using a patterned  
photoresist as a mask;

forming a conductive region on the semiconductor substrate;

forming an interleaving insulating film having a contact hole therein over  
the conductive region;

forming a contact plug within the contact hole;

forming insulating film patterns on the interleaving insulating film to expose the contact plug and the interleaving insulating film adjacent to the contact plug;

depositing a barrier film and a first conductive layer on the contact plug and the insulating film patterns;

forming a photoresist over the contact plug between the insulating film patterns;

sequentially removing the first conductive layer and the barrier film on the insulating film patterns using the photoresist as a mask, thereby forming a lower electrode and a barrier film in a U-shape in cross-section;

removing the photoresist using an etching gas that is non-reactive with respect to the lower electrode, wherein the etching gas is one of  $H_2O$ , a mixture of  $H_2$  and  $O_2$  in which an amount of  $H_2$  is smaller than an amount of  $O_2$ , a mixture  $H_2O$ ,  $NH_3$ , and  $N_2$ , a mixture of  $N_2$  and  $NH_3$ , a mixture of  $NH_3$  and  $H_2O$ , and a mixture of  $N_2$  and  $H_2O$ ;

removing the insulating film patterns; and

sequentially forming a dielectric film and an upper electrode on the lower electrode and the barrier film.

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E2  
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Please **add claims 11 and 12** as follows:

*D<sup>3</sup>* -- **11.** A method for fabricating a capacitor of a semiconductor device comprising:

depositing a nitride film and an oxide film over a substrate, the oxide film being deposited on the nitride film by chemical vapor deposition;

sequentially etching the oxide film and the nitride film using a patterned photoresist as a mask;

depositing a conductive layer over the substrate;

forming a photoresist pattern on the conductive layer;

etching the conductive layer using the photoresist pattern as a mask to form a lower electrode;

removing the photoresist using an etching gas that is non-reactive with respect to the lower electrode; and

forming a dielectric film and an upper electrode on a surface of the lower electrode.

**12.** A method for fabricating a capacitor of a semiconductor device comprising:

depositing a nitride film and an oxide film over a semiconductor substrate, the oxide film being deposited on the nitride film by chemical vapor deposition;

sequentially etching the oxide film and the nitride film using a patterned photoresist as a mask;

forming a conductive region on the semiconductor substrate;

forming an interleaving insulating film having a contact hole therein over the conductive region;

forming a contact plug within the contact hole;

forming insulating film patterns on the interleaving insulating film to expose the contact plug and the interleaving insulating film adjacent to the contact plug;

depositing a barrier film and a first conductive layer on the contact plug and the insulating film patterns;

forming a photoresist over the contact plug between the insulating film patterns;

sequentially removing the first conductive layer and the barrier film on the insulating film patterns using the photoresist as a mask, thereby forming a lower electrode and a barrier film in a U-shape in cross-section;

removing the photoresist using an etching gas that is non-reactive with respect to the lower electrode;

removing the insulating film patterns; and

sequentially forming a dielectric film and an upper electrode on the lower electrode and the barrier film. --

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D3